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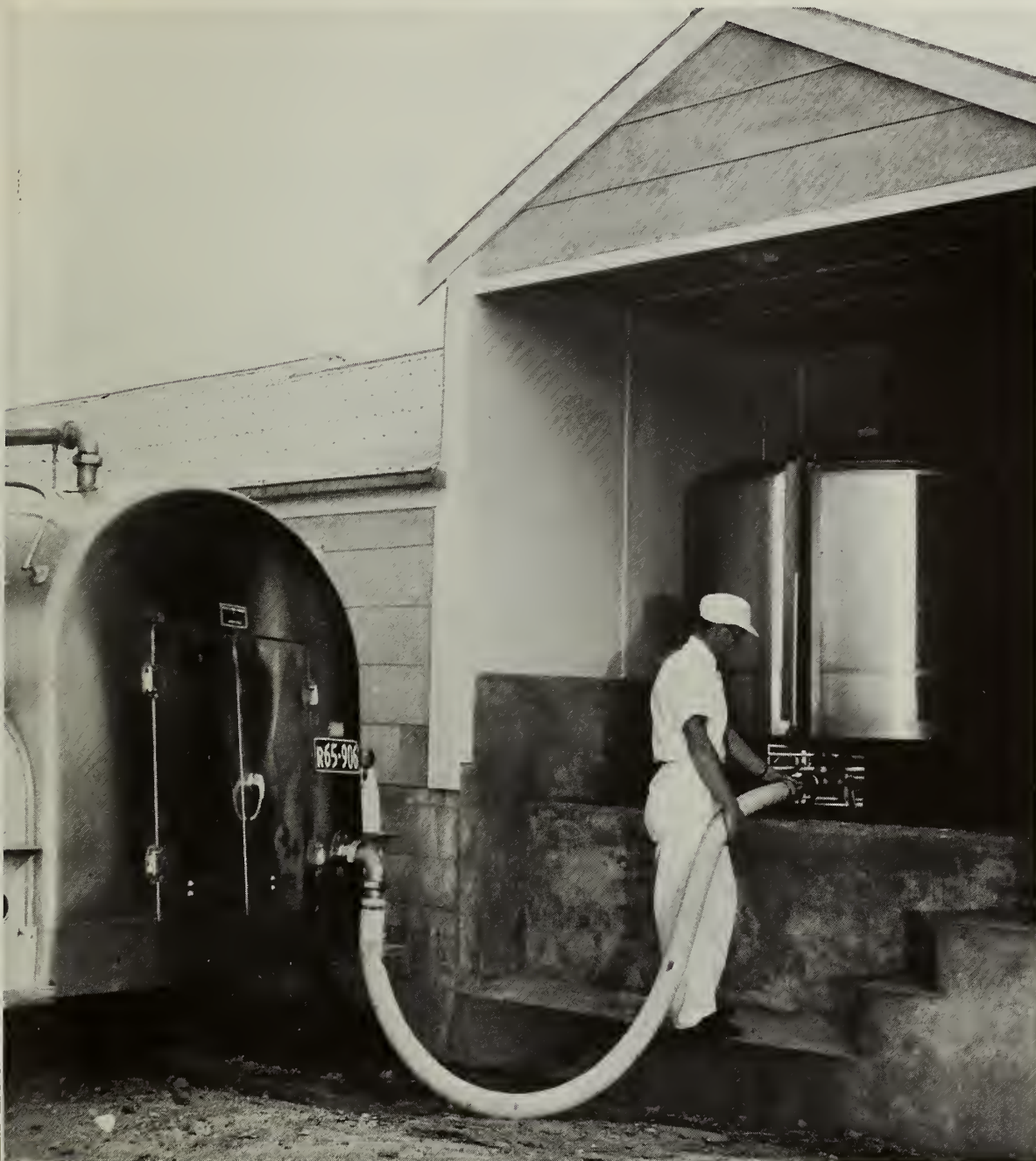
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FOREIGN AGRICULTURE

April 25, 1977



Collecting milk, New Zealand

TRI-AGENCY READING ROOM

• Rhodesia's Impact on World Tobacco Trade

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In this issue:

- 2 Rhodesia's Political Change May Alter World Tobacco Trade** By Robert E. Haresnape
- 4 Meat Markets Prime Concern in Australia, New Zealand** By R. E. Anderson, Jr.
- 8 Italy's 1976 Farm Output Down, Trade Expanded**
- 10 Record Grain Crop Helps Boost USSR's Farm Output**
- 12 Brazil's Support Program Spurs Soybean Output** By Robert J. Wicks
- 14 Inflation, Unemployment Hinder Spain's Growth**
- 15 Some Fertilizer Importers May Be Future Exporters** By Kathy Kayser

This week's cover:

Collecting milk from farm vat into motor tanker, North Island, New Zealand. Excellent pasture conditions in New Zealand have contributed to the expected 5 percent increase in milk output. See report on Australia's and New Zealand's livestock and dairy industries, beginning on page 4.

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Rhodesia's Political Change May Alter Tobacco Trade

By ROBERT E. HARESNAPE
Foreign Commodity Analysis, Tobacco Foreign Agricultural Service

THE OUTCOME of the political change that appears inevitable in Rhodesia could have important effects on world tobacco trade. Depending on future Government policies, Rhodesia's tobacco exports could expand sharply, depressing world prices, and competing with U.S. exports.

In 1965—the year Rhodesia declared independence from the United Kingdom—the country ranked second only to the United States as an exporter of flue-cured tobacco. Although in recent years Rhodesian production and exports dropped off as a result of United Nations (U.N.) trade sanctions, a change in the country's political situation could see output and shipments of flue-cured tobacco rise again.

Until after World War II, Rhodesia was a minor exporter of tobacco, with exports averaging less than 2,200 metric tons during 1930-39. During the war, average exports rose to just over 14,000 tons (1940-45), eventually reaching a peak of nearly 121,000 tons in 1965.

However, tobacco exports in 1964-65 were far above the existing trend, owing to production increases and a strong export push by tobacco traders in 1965, in expectation of independence and possible trade sanctions.

Rhodesia's emergence as a major tobacco exporter was an outgrowth of a combination of the world dollar shortage after the war, its Commonwealth ties, and its ability to furnish reciprocal trade to the largest importer—the United Kingdom.

Rhodesia obtained a guaranteed purchase arrangement from the United Kingdom that varied between 80,000 and 85,000 tons annually. This—coupled with a 44-cents-per-kilogram Commonwealth preference and the price support umbrella on competing tobacco from the United States—was an effective export guarantee for the Rhodesian tobacco grower. Guaranteed bilateral purchase commitments were also obtained from South Africa and France.

Mr. Haresnape is now with the FAS Fruit and Vegetables Division.

In 1965, Rhodesia accounted for nearly one-third of free world flue-cured tobacco exports, supplying tobacco to 67 countries, and in direct competition with the United States. That year, Rhodesia exported 120,000 tons of tobacco, 98 percent of which was flue-cured. The United Kingdom and West Germany were Rhodesia's top export customers—taking 46,200 tons and 18,700 tons, respectively. The top 10 markets accounted for 85 percent of Rhodesia's total tobacco exports.

Rhodesia's tobacco prosperity came to an end when independence was declared in 1965, followed by the U.N. trade sanctions. As a consequence of the U.N. embargo, production in 1968 dropped to an estimated 60,000 tons from the record high production of 138,000 tons in 1964.

But the U.N. embargo did not prevent Rhodesia from exporting tobacco. Following the sharp drop when the embargo went into effect, Rhodesia found effective means to circumvent the embargo, and both production and exports of tobacco rose again.

DURING 1949-66, tobacco production was increasing at an average rate of over 5,000 tons a year. Since 1966 no data on production or exports have been available. But since the low point of 1968, the trend of estimated production indicates a rise of more than 3,700 tons annually. Presumably, exports have continued at a relatively high level, since only 5-10 percent of production is required for domestic manufacture. Estimated production in 1976—at roughly 85,000 tons—is only 50 percent of the potential output predicted by the trendline just prior to independence.

Under the current political situation, Rhodesia's tobacco production and exports most probably will decline from present levels. A recently announced draft procedure for the military will reduce the number of workers available to harvest the tobacco crop, and rail and road communications within and

out of the landlocked country have been disrupted. The Rhodesian Tobacco Association has expressed concern over the future of tobacco production, stating it could become extremely difficult—if not impossible—to continue production.

In addition, the U.N. Sanctions Committee recently advised Member States not to trade with three Geneva-based companies that are believed to have facilitated exports of a large proportion of Rhodesia's tobacco in recent years, a move that could further reduce exports.

Rhodesia's future as a tobacco exporter is uncertain—exports could expand, decline, or stagnate, depending on the policies implemented by Government. Postulating three policy situations under an emergent Government offers a look at possible effects on world tobacco trade stemming from political change in Rhodesia.

A new Government could:

- Make little change, leaving effective control of the tobacco industry and production units in the hands of the present owners. Economic stability would be given top priority, with a big push for tobacco production and export earnings. U.N. sanctions would be lifted, and the European Community (EC) would grant Rhodesia's tobacco duty-free status.

Rhodesia's cost of production cur-

rently is low—approximately 88 cents per kilogram—and there appear to be no severely limiting inputs at much higher production levels.

Therefore, under this option, tobacco production could double to nearly 180,000 tons within 5 years, with exports exceeding 160,000 tons. Such a flood of flue-cured tobacco on the world market would depress prices, curtail demand for high-cost tobacco (such as that from the United States and Canada), and cut the rate of expansion in many other developing countries.

- Expropriate production units and/or nationalize the tobacco industry. Disruption of production and a severe shortage of trained personnel could result.

Under such conditions, the quantity and quality of tobacco production likely would decline, and there could be a small, but favorable short-term impact on U.S. tobacco exports.

In the longer term, expanded production and exports would be sought by Rhodesia, since tobacco would be the top foreign exchange earner in agriculture, and second nationally only to mineral exports. The Government would almost certainly seek foreign technical expertise and development assistance to revive production and exports, which in time would recover to or exceed the peak levels of the post-in-

dependence period. Under these circumstances, Rhodesia's level of exports would differ little from that of recent years, but exports would be diverted to Japan and West European markets in greater volume.

- Adopt a policy somewhere between the above two extremes. There would be an orderly transition, moderate land reform, and retention of some experienced personnel at the industry and farm management levels. U.N. economic sanctions would be lifted, and duty-free preference would be extended by the EC.

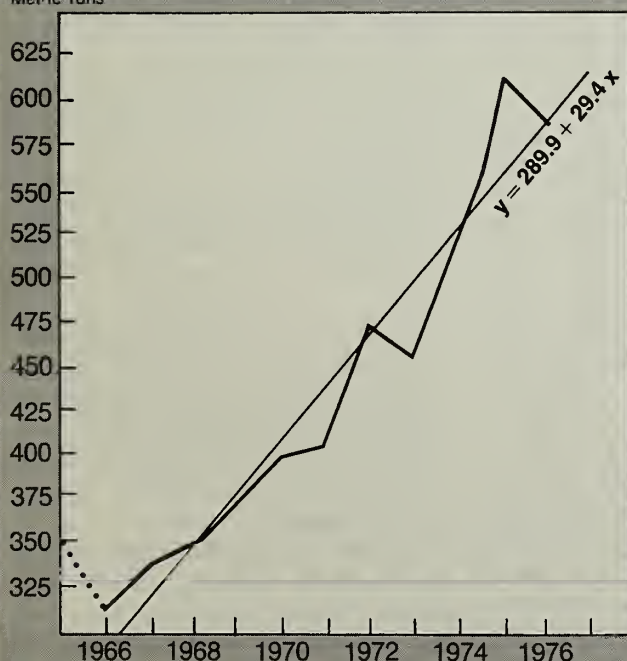
Under this structural alternative, tobacco production would likely increase at an average annual rate of around 10,000 tons, reaching 130,000-140,000 tons over a 5-year period. Rhodesia would then be exporting 120,000-130,000 tons of tobacco, most of which would be replacing U.S. and Canadian tobacco in West European markets and probably preclude any possible increase in U.S. exports to East European markets. The impact on production would be less dramatic than under the "little change" alternative, owing to the inefficiencies generally associated with initiation of land reform and a proliferation of smaller production units.

Regardless of which course is taken, Rhodesia will be faced with more competition in world markets than in 1966.

Continued on page 4

COMBINED FLUE-CURED PRODUCTION OF SELECTED COUNTRIES¹

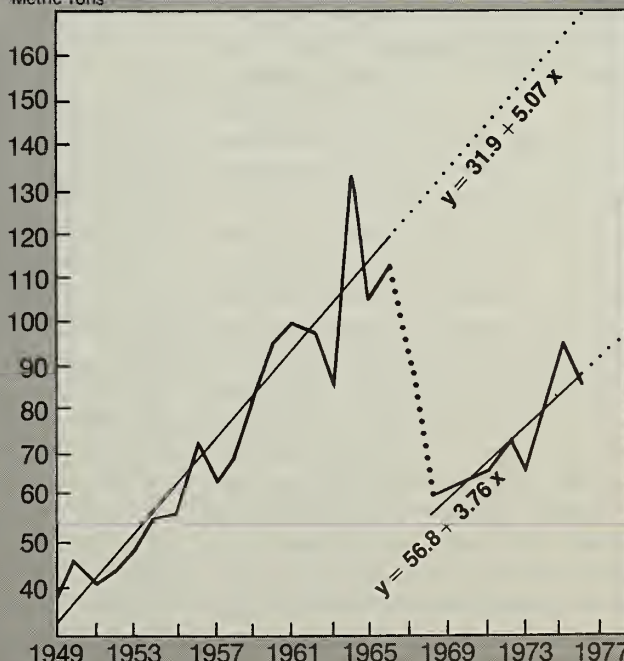
Thousand Metric Tons



¹ Argentina, Brazil, Malawi, Tanzania, Thailand, and South Korea.

RHODESIAN TOBACCO PRODUCTION

Thousand Metric Tons



Estimated after 1965

Independence Declared Nov. 1965

U.N. sanctions applied

At that time, alternative supplies of flue-cured tobacco were not as readily available, and Rhodesia sold one-third of its crop to the United Kingdom on a preferential quota, while developing other markets in Europe and elsewhere. Today, Rhodesia would be expected to receive the same terms in the EC as do other African, Caribbean, and Pacific (ACP) countries (zero duty), or—at least—the Generalized System of Preference (GSP) status of other less developed countries. Since the EC implemented the GSP in 1974, India has supplied about 60 percent of the 90,000 tons of quota imports through 1976.

Since the U.N. embargo on Rhodesian exports, a number of developing countries have expanded flue-cured tobacco production for the export trade at a rapid rate. Six such countries—Argentina, Brazil, Malawi, Tanzania, Thailand, and South Korea—have increased total flue-cured production from less than 300,000 tons in 1966 to over 600,000 tons in 1975. It is estimated that combined flue-cured exports from these six countries increased from roughly 4,500 tons to over 135,000 tons during the same period.

Based on current trends and considering the comparative cost and price advantages, larger Rhodesian tobacco production and trade would depress world prices, making U.S. tobacco even less price-competitive than at present.

As an example, the U.K. average import values of tobacco in 1965 from selected countries were (in dollars per kilogram): United States (\$2.27), Malawi (\$1.26), Tanzania (\$0.99), and Rhodesia (\$1.26). U.K. average import values in 1975 were: United States (\$3.55), Malawi (\$2.47), and Tanzania (\$2.49), with no recorded imports from Rhodesia after 1966.

There is little doubt that the less expensive, Rhodesian flue-cured tobacco would be a welcome commodity on world markets, as the quality of the leaf is reportedly excelled only by that grown in the United States. The Rhodesian leaf may lack the "body and flavor" of U.S. flue-cured, but the developing trend towards low-tar and low-nicotine cigarettes could make this a positive factor with manufacturers.

Free world flue-cured tobacco is currently in adequate supply. However, any substantial increase in Rhodesian exports of this commodity will upset the balance and lower prevailing prices, resulting in stronger competition.

Meat Markets Prime Concern In Australia, New Zealand

By R. E. ANDERSON, JR.

*Foreign Commodity Analysis—Dairy, Livestock, and Poultry
Foreign Agricultural Service*

LIVESTOCK INDUSTRIES in New Zealand and Australia¹ face problems in different sectors in 1977. New Zealand's prime concern will be a 17 percent drop in beef and veal production and an estimated 24 percent decline in beef and veal exports, while Australia attempts to rationalize a troubled dairy industry. Meanwhile, Australia's lamb exports are forecast to jump 18 percent during the year, while New Zealand searches for export customers for lamb other than the dwindling U.K. market.

New Zealand's Ministry of Agriculture and Fisheries is forecasting a sharp decline in the country's 1977 beef and veal output to 500,000 metric tons (cwe)—17 percent below last year's output of 605,000 tons.

Much of the decline is attributed to lower cattle slaughter, which was down 21 percent so far this marketing year (October 1, 1976-March 5, 1977).

After allowing for domestic consumption and boning out, New Zealand's export production of beef and veal will total 219,000 tons, product weight, compared with 287,800 tons in 1975/76.

The United States probably will continue to be New Zealand's leading beef and veal customer during 1977. Some cutbacks in shipments to Canada are expected, as Canada will permit only 27,500 tons of New Zealand beef to be imported during 1977, compared with 37,000 tons in 1976.

In Australia, on the other hand, slaughtering plants are currently working to capacity and show no signs of slackening. Adult cattle slaughter through January 1977 was running 8 percent above that of last year. One reason for the high slaughter rate is that the carrying capacity of pastures has dropped. Producers have not top-dressed pastures for the past 2-3 years because of the high price of fertilizer. As a result, phosphate deficiencies are starting to show up, and the general

carrying capacity per hectare has been reduced.

Beef and veal production in 1977 is forecast to rise about 5 percent to 1.9 million tons (cwe). Domestic demand for beef is not expected to change significantly in 1977, and should amount to roughly 925,000 tons. Disposable incomes are expected to keep pace with inflation, while prices of competing meats should remain constant.

Exports of Australian beef in 1977 are projected at roughly 1 million tons (675,000 tons product weight)—about 16 percent over exports in 1976. Carry-in stocks of beef in 1977—140,000 tons (cwe)—will likely drop to around 115,000 tons by the end of the year.

THE AUSTRALIAN dairy industry currently is going through a very difficult period—a severe drought and shrinking export markets have forced many producers out of dairying and resulted in a complete rationalization of the industry.

As a result, the Australian Government will soon announce a new, two-stage National Dairy Entitlement Scheme, effective July 1, 1977, which will limit the production of all manufactured dairy products to domestic needs plus a "realistic assessment" of export sales.

Milk production in the 1976/77 marketing year is expected to decline 10 percent to 5.8 million tons, compared with a 3 percent drop in 1975/76.

As a short-term assistance measure, the Australian Government has extended minimum returns for butter and cheese through June 1977. The equalization prices are US\$1,242 per metric ton for butter and US\$886 per metric ton for cheese.

In contrast, New Zealand's milk output has been buoyant in its 1976/77 season. Pasture conditions have been excellent throughout the country, with the result that production in the 1976/77 marketing year is expected to rise about 5 percent to 6.7 million tons.

¹Based on Mr. Anderson's trip to these countries, February 3-23, 1977.

The New Zealand dairy industry has concentrated nearly all its export efforts in the United Kingdom, banking entirely on U.K. ability to continue obtaining special access for New Zealand butter.

Currently, New Zealand has access to the U.K. butter market during 1978-80, at annual levels between 115,000-125,000 tons. However, under this European Community-New Zealand agreement, New Zealand cannot supply more than 25 percent of Britain's domestic retail butter consumption.

As the retail price of butter in the United Kingdom rises from its current level of \$1.96 per kilogram to an eventual level of \$3.30 per kilogram, butter consumption is expected to decline to about 300,000 tons by 1980. The impact on the New Zealand dairy industry is that it will only be able to supply about 75,000 tons to the British retail butter market. The remaining 45,000 tons will have to be sold for industrial use in processing, which may be extremely difficult to do.

Australia and New Zealand are the

only two major exporting countries of sheepmeat—supplying about 80-90 percent of total world sheepmeat exports. With lamb prices expecting to remain firm in 1977, Australia's exports are expected to increase 18 percent to 45,000 tons, compared with 38,000 tons (cwe) in 1976.

Australia's major market for lamb in 1976 again was the Middle East, with exports totaling 27,000 tons (product weight), an increase of 8 percent over shipments in 1975. Exports to this promising export market are forecast to

New Zealand's Export Meat Price Plan

Late last year, the New Zealand Parliament enacted the 1976 Meat Export Prices Act. Designed as a price-smoothing scheme for export meat, the 1976 Act's major new feature is its provision for industry self-financing. As a result, minimum prices for export can be set at more realistic levels, price support loans from the Reserve Bank can be repaid, and eventually the Meat Income Stabilization account will be replenished.

Over the past 2 years, minimum price-support programs for meat have been hampered by depletion of surplus funds accumulated from export levies immediately following World War II.

The new price-smoothing scheme will be administered by New Zealand's Meat Board, in accordance with price levels established by the Meat Export Prices Committee. Before the start of each season (October 1), the Committee will fix minimum and trigger prices for cattle, sheep, and lambs on the basis of representative benchmark grades of export meat.

The benchmark grades are reference points for the four main classes of export meat—lamb, mutton, and two classes of beef. The Committee has the option of reviewing the minimum and trigger prices during the season.

The minimum and trigger prices (in NZ cents per kg, carcass weight basis,) for the four benchmark grades for the October 1, 1976-September 30, 1977, season are:

	Minimum	Trigger
Lamb, PM grade	55	72
Mutton, EL grade	21	30
Beef:		
Prime steer P1	55	80
Manufacturing cow M	40	60

Supplemental payments will be made to producers and/or sellers of livestock for export slaughter when the exporters' schedule of prices falls below the benchmark price for any class of meat. However, the Meat Board may choose to intervene in the market so that producers receive at least the minimum prices. The Meat Board is responsible for setting minimum prices for nonbenchmark

grades of any class of meat, should the schedule price fall below the benchmark price.

Deductions from producer returns to build up or replenish meat income stabilization accounts will be made whenever the export schedule price exceeds the trigger price for a benchmark grade. Deductions equal to 50 percent of the receipts above trigger price will be calculated for each class and grade of meat. In addition, deductions will be calculated as a percentage of the current weekly schedule prices and announced at the same time as the schedule prices, so that producers will know what amount is being deducted.

In setting minimum prices, the Committee will be guided by market trends and prospects, and will calculate a 3-year average market price for each of the benchmark grades from assessed, estimated, and forecast market price averages for the previous, current, and coming seasons, respectively.

The Committee then sets minimum prices within a range of 10 percent above or below the 3-year averages. However, in exceptional circumstances, the Committee can deviate from this 10-percent limit.

In addition, the Committee will also take into account the market trends and prospects for meat (relative to other farm products), the state of the meat industry income stabilization accounts, and the desirability of expanding meat production.

When the Committee sets the trigger prices, it will take into consideration market trends and prospects for meat and other farm products, the status of the meat income stabilization accounts, and the suitability of maintaining a sufficient margin above the minimum price levels to allow normal commercial marketing.

In order to finance the minimum price scheme, when the meat income stabilization accounts contain insufficient funds, the Meat Board may borrow from the Reserve Bank, with interest charges on these loans of 1 percent. Surplus funds in these accounts also earn interest at the 1-percent rate.

—Q. MARTIN MORGAN, FAS

increase by 22 percent in 1977 to 33,000 tons.

Lamb numbers in Australia were expected to decline by March 1977 from the 148.6 million sheep and lamb totals of March 31, 1976. Drought in winter and early spring of 1976 affected many of the fat lamb producing areas; lambing rates were down and both ewes and lambs began the spring in relatively poor condition.

Lamb slaughtering in calendar 1976 totaled 16.2 million head, 4 percent over that of 1975 and yielding a 3 percent increase in production to 262,000 tons. Lamb slaughterings should decrease about 1 percent in 1977 to 16 million head, but production should be about the same as in 1976.

Domestic per capita lamb consumption should decline by approximately 6 percent in 1977 as a result of a decrease in slaughtering, as producers rebuild their herds in expectation of stronger prices and an increase in export demand.

New Zealand's total export lamb production during 1976 totaled 334,400 tons—up 9 percent over that of a year ago. Production in 1977 is estimated at 342,000 tons.

New Zealand's lamb exports also rose in 1976 to 315,000 tons, a 7 percent increase over a year earlier. Shipments to the Middle East totaled 34,000 tons—a jump of 94 percent over exports to this area in 1975—owing mainly to increased shipments to Iran totaling 19,400 tons. The New Zealand Meat Product Board estimates sales to Iran could rise to around 50,000 tons annually in the next 5 years, if the demand by Mideast consumers for lean lamb can be met.

However, lamb shipments to the United Kingdom—New Zealand's largest export market—declined by 9 percent in 1976 to 204,000 tons. A further decline is forecast for 1977 to 200,000 tons.

Substitution within the U.K. meat sector of lower priced meat such as pork and poultry for higher priced meats such as beef and lamb—as well as some overall decline in U.K. meat consumption—is responsible for the decline in New Zealand's lamb exports to this market.

A recommendation has been made to the New Zealand Meat Product Board that the target for lamb exports to markets outside the United Kingdom be maintained at 30 percent in the 1976/

77 season. It has also been recommended that exporters failing to achieve the 30 percent target be subject to a levy of NZ1.0 cents per kilogram on the shortfall, but that no bonus be given for exceeding the target.

During the 1975/76 season, the penalty was approximately NZ2.2 cents per kilogram and there was a bonus of NZ0.5 cents per kilogram on any shipments above the target.

New Zealand's lamb producers are expected to pay \$NZ52 million in import duties in 1977 in order to get their product on the U.K. market, an estimated \$NZ14 million more than was paid in 1976. The EC Common Customs Tariff will rise from 16 percent to 20 percent as of July 1, 1977. This tariff is fixed on the value of lamb, so that when prices rise—as they are expected to do—the duty will also rise. The New Zealand Meat Product Board has forecast that the duty will account for 24 percent of the total charges of getting lamb from the New Zealand farm gate to the U.K. market.

In the United Kingdom, a major importer of sheepmeat, lamb numbers in 1976 were down 2 percent from a year earlier to 13.5 million head. Production was also lower—185,000 tons, 6 percent less than in 1975. Production in 1977 is estimated at 182,000 tons, with prices likely to remain firm.

Imports of lamb by the United Kingdom during the 10 months ending October 1976 totaled 185,000 tons, 13 percent lower than a year earlier. Imports from New Zealand were down as well, while imports from Australia

during this time were down 62 percent to 900 tons.

U.K. stocks of imported mutton and lamb have been steadily decreasing to 18,400 tons in January 1977 after peaking in October 1976 at 22,200 tons.

In the United States, sheep and lamb numbers as of January 1, 1977, were estimated at 12.7 million head, down 5 percent from a year earlier. Total sheep and lamb slaughter last year is thought to be roughly 6.9 million head, down 14 percent from the previous year, while production was estimated at 169,000 tons—off 9 percent.

According to USDA, a reduction in the 1977 beginning inventory points to a continued reduction in slaughterings by as much as 5 percent. However, lamb, ewe, ram, and wether replacements were up between 4-7 percent, indicating that the decline in U.S. sheep numbers may have bottomed out.

A short supply of lamb has resulted in high retail prices and subsequent fall in consumer offtake. Mutton and lamb consumption declined in 1976 to 0.9 kilograms per capita while prices rose to \$4.01 per kilogram in November.

Total imports of lamb during 1976 were 15,546 tons, compared with 11,166 tons in 1975. Imports of lamb from New Zealand increased by 3,482 tons to 12,346 tons, while imports from Australia were up to 3,165 tons, an increase of 873 tons.

Imports from New Zealand in 1977 are expected to total 13,000 tons, while those from Australia may fall slightly to 3,000 tons. Total imports in 1977 are forecast to be 16,000 tons.



Cheddar cheese curd ready for pressing, Sheparton, Victoria, Australia.

Oil and Meal Production Estimates Lowered

WORLD PRODUCTION of high-protein meals during 1977 is now indicated to be 66.6 million tons¹ (soybean meal equivalent)—5.3 million tons below the record 1976 volume and 800,000 tons less than the February estimate. Adding the increased carry-in of U.S. stocks of soybeans and meal at 5.6 million tons (meal basis), total meal supplies at 72.2 million tons are still 4 million tons below last year's.

World trade in oilseeds and meals is forecast to dip slightly to 32.3 million tons (meal basis), despite larger animal numbers in several foreign markets and increased movements of soybeans to the Soviet Union and the People's Republic of China. This will mean smaller availabilities to some traditional markets, forcing a reduction in meal feeding rates and causing prices to remain at high levels compared with last year's, and relative to grain prices.

The current estimates of production and exports represent slight downward revisions from those of March. The principal changes reflect less-than-expected 1977 crop soybean production in Brazil and Argentina, caused by unfavorable growing conditions.

The likely result could be continued strong prices for oilseeds and products, which would bring supply and demand into balance. Price relationships now clearly favor expanded 1977 crop oilseed plantings. The Canadian planting intentions report of March 15 indicated significant gains in flaxseed and soybeans and a very sharp recovery in rapeseed plantings.

The reduction in world supplies in 1977 reflects a 5.6-million-ton reduction in U.S. production—largely the result of a smaller 1976 soybean harvest. In the foreign sector, a below-trend gain of only 240,000 tons follows three consecutive above-trend gains. World soybean meal production is forecast at 40.4

CURRENT SUPPLY SITUATION UNLIKE 1973'S

The current world meal and oil supply situation is substantially different from that of 1973, when exports of U.S. soybeans were restricted for a brief period:

- The U.S. soybean supply situation in 1976/77 at 41 million tons is 12 percent above the 1972/73 volume;

- Exportable supplies of soybeans and meal from the 1977 Brazilian crop now being harvested are estimated at about 7.6 million tons (meal basis), compared with only 2.8 million tons in 1973;

- Exportable supplies of soybeans and meal from the 1977 Argentine crop now being harvested are estimated to be about 450,000 tons (meal basis), against only 54,000 tons in 1973;

- Prices for soybeans and products so far this season have increased sharply over those in the same months a year earlier to levels significantly above those of the same months in 1972/73. These increases are expected to result in some reduction in domestic as well as foreign use, thus bringing supply and demand into balance;

- The world is now significantly less dependent upon U.S. exports of soybeans and meal than in 1972/73, reflecting sharp above-trend gains in foreign production of oils and meals;

- World fish meal exports, which in 1973 dropped by 1.8 million tons (meal equivalent), are this year expected to increase somewhat to about 2.7 million tons (meal equivalent), or 40 percent above the depressed 1973 volume.

million tons—down 5.5 million tons from the 1976 level, despite estimates of significant gains in Brazil and Argentina production.

Combined U.S. exports of oilseeds and meals are expected to be down about 900,000 tons (meal basis)—much less than the indicated drop in production, reflecting an anticipated sharp decline in stocks as well as some reduction in domestic consumption.

Foreign exports of oilseeds and meals at 15.7 million tons (meal equivalent) are expected to gain sharply, resulting in some stock depletion in the exporting countries. World exports of soybeans and meal are forecast at 24.4 million tons (meal basis)—only slightly below last year's record volume.

World output of vegetable, animal, and marine oils and fats during 1977 is now forecast at 48.1 million tons—down 1.1 million tons from the record 1976 volume. Adding the U.S. carry-in stocks of all oils and fats and including the oil equivalent of oilseeds at 2.3 million tons, total 1977 supplies at 50.4 million tons would be 310,000 tons below the 1976 volume.

Combined U.S. fats and oils production is forecast at 10.8 million tons—down 1.3 million tons from the 1976 volume. Foreign output of all oils and

fats at 37.3 million tons is forecast to register a sharply smaller gain than in recent years. This reflects an expected decline in coconut, peanut, rapeseed, and olive oils. However, significant gains are expected in palm, cotton, soybean, and sunflowerseed oils.

World soybean oil output is forecast at 9 million tons or 1.2 million tons below the record 1976 volume.

Aggregate world exports of oilseeds, oils, and fats are forecast at 16 million tons (oil basis), 620,000 tons above last year's total. All of the gain is expected to be from the foreign sector, with combined U.S. exports unchanged at last year's 5-million-ton volume. World exports of soybeans and oil at 4.6 million tons are expected to register a below-trend gain of 110,000 tons.

The pressure point in the oilseed supply situation this year is meal, not oil. Soybean meal prices on April 14 were 111 percent above those of a year earlier, while soybean oil prices were up 72 percent from those of the same date last year. Meal, at current prices, is now 2.9 times the price of corn, compared with only 1.4 a year earlier.

This factor, together with generally lower livestock and poultry profitability ratios, would mean a prospective cut in meal feeding rates.

—ALAN E. HOLZ, FAS

¹ All tons are metric.

ITALY'S 1976 FARM OUTPUT DOWN, TRADE EXPANDED

DESPITE A SPRING drought and fall flooding, Italian agriculture fared better than expected in 1976, as crop production fell only 0.6 percent in value. The outlook for 1977 farm output depends substantially on the weather, and it is anticipated that fall and early winter rains have already hurt the wheat crop, but will benefit alternative crops such as corn and sugarbeets. Prospects are good that the Government will continue to favor livestock and meat production, which will in turn spur increased imports of U.S. feedgrains and oilseeds.

On the whole, the Italian economy made a remarkable recovery in 1976 from the 1975 recession, despite monetary instability and a 20-percent inflation rate. The real gross national product grew nearly 5 percent, compared with a nearly 4-percent decline in 1975. Agriculture, with its slight decline in production, however, did not share in the growth.

Italian agricultural trade expanded in 1976, with U.S. exports to Italy reaching a record of \$875 million, up 10 percent from year-earlier levels. U.S. exports to Italy continue to be dominated by animal feeds, corn, oilseeds, and oilseed meal, although hides and skins exports also showed surprising growth in 1976.

U.S. tobacco exports continued to gain in the Italian market in 1976, with the total value reaching \$51.5 million. U.S. wheat exports to Italy, however, were off by 25 percent from the previous year to \$56.2 million, while cotton exports from the United States were also lower, owing to shifts to other suppliers.

Italy's agricultural trade with the rest of the world also expanded in 1976; however, imports continued to outstrip exports. Preliminary data show Italy's trade deficit for 1976 at roughly \$6.1 billion, up from \$3.1 billion in 1975. Italy's trade deficit for food and feedstuffs was estimated to reach about \$4 billion in 1976, with meat accounting for the major portion of this deficit.

Fuel and food imports continue to constitute the largest trade drain on Italy's economy. In the food sector, Italy's agricultural imports jumped 27 percent in 1976 to about \$6.6 billion. About half of the increase came from the feed-livestock sector—cattle, meat, wool, dairy products, hides, feedgrains, and oilseeds. During the first 9 months of calendar 1976, cattle and meat imports increased by about 30 percent, cheese by over 40 percent, and wool and hides and skins by 100 percent. Owing to lower prices, feed imports were up only slightly.

Italy's overall agricultural exports showed some improvement during 1976, totaling \$2.6 billion, up about 25 percent over the same period last year. The largest gains came from wine exports—up over 33 percent to \$289 million during the first 9 months of the year. Vegetable exports were another bright spot, with shipments up nearly 75 percent to \$278 million during the same period. Most of this trade was with Northern Europe, where last summer's drought cut vegetable production. Exports of tomato products were also higher for this reason.

U.S. imports from Italy should reach a record level of about \$178 million in 1976, as Italy nearly doubled its wine shipments to the United States and the value of all Italian wine imports rose nearly 25 percent to \$82 million. The decline of the value of the lira favors a further expansion of this trade, as does Italy's more aggressive marketing campaign in the United States. Tomato products, olive oil, and cheese shipments also made some gains, although the volume of the trade remains relatively small.

A review of Italian agricultural production follows:

Livestock and feedgrains. Italy's livestock sector enjoyed solid growth during 1976 (see *Foreign Agriculture*, Jan. 17, 1977) for a variety of reasons, including:

- Consumer demand remained strong throughout the year and per capita meat consumption was up by nearly 4 percent;
- Producer prices for livestock gained significantly;
- Corn prices increased relatively moderately during 1976, owing to substantial harvests throughout the world and particularly in the United States—Italy's main supplier;
- Profits from livestock raising were generally good for most livestock producers, owing to rising meat prices and moderate feedgrain prices;
- Italian Government legislation continued to favor livestock producers.

The total volume of Italy's meat production gained by 5 percent in 1976 to an estimated 2.8 million metric tons. Slight gains were realized in most livestock and poultry sectors—beef and veal (up 5 percent to 1.01 million tons), pork (up 8 percent to 850,000 tons), lamb, mutton, and goat meat (up slightly to 50,000 tons), poultry (up 3 percent to 876,000 tons), and eggs (up slightly to almost 11.5 billion eggs).

The outlook for the feed-livestock sector in 1977 is favorable, although not as good as in 1976. Consumer demand will probably contract somewhat as the Government's deflationary programs begin to take effect.

Feed prices may rise only moderately in 1977, since a larger corn area is expected in Italy during the year. However, since Italy is heavily dependent on feedstuffs, feed prices will depend more on weather in the United States than on anything else. Further slippage in the value of the lira against the dollar would also raise feed prices.

Profit margins for livestock producers will probably be reduced somewhat from the favorable levels of 1976, particularly for hogs; however, margins should be adequate to support additional expansion of the industry.

Wheat. Dry weather last spring did no real damage to the 1976 wheat crop. The quality and yield of the 1976 soft wheat crop actually increased, pushing the total crop to 6.2 million tons—roughly the same as the 1975 crop.

The 1976 Durum crop, which matures later in the year, suffered more from wet weather than from the drought. Yields fell below 1975 levels, depressing the 1976 crop to 3.2 million tons—with the bulk of import originating in France. The 400,000 tons. The 1977 soft wheat crop probably has been hurt by the wet weather that soaked Italy this past fall. Delay in sowing may shift some area from winter wheat to spring-planted corn, barley, or sugarbeets. Imports of soft wheat in 1976/77 should remain large—roughly 1.4 million tons—with the bulk of import originating from France. The

Durum wheat crop in 1977, which is planted later in the year, should not have been hurt by rain.

Corn. Italy's 1976 corn crop totaled roughly 5.1 million tons; however, a record crop of 5.5 million tons or more could be harvested in 1977, as some land not seeded in winter wheat will be shifted to corn production. Corn imports in 1976/77 should approximate 4.7 million tons, with the United States supplying about 2.7 million tons of this total.

Rice. Heavy rains also hurt the 1976 rice crop, with poor harvesting conditions and heavy lodging damage cutting production to roughly 976,000 tons—down 3.3 percent from 1975. Exports should reach 600,000 tons, about 60,000 tons below last year's level.

Rice planting in 1977 should expand owing to profitable prices and lack of alternative crops, and production is forecast at 1.05 million tons.

Cotton. Cotton consumption by Italian spinning mills rose 7 percent in 1975/76 to 195,000 tons, and textile stocks, which had been depleted in 1975, were restored to normal levels. Mill arrivals of raw cotton in 1975/76 totaled 193,000 tons—14 percent higher than in 1974/75—with Turkey being the major source of imported cotton.

There has been some slowdown in mill activity in recent months and it is almost a certainty that cotton consumption will decline between 3-5 percent this year from the very favorable level of last season, if for no reason except the changed textile stock situation.

Tobacco. Production of tobacco in Italy in 1976 was estimated at 109,000 tons—4 percent lower than in 1975, despite a 6 percent increase in area. Excessive rains during the season reduced yields and quality of the crop.

Exports of Italian tobacco declined 9 percent in 1975 and were continuing low in 1976, with only 2,000 tons of flue-cured tobacco from the 1976 crop exported so far during the current marketing year. This apparently is due to major world manufacturers reducing their stocks of baled tobacco. The Italian Monopoly is expected to increase its use of Italian tobacco in 1976/77 and reduce imports. However, imports of U.S. tobacco should remain high, as Italian cigarettes using U.S. tobacco are increasing in popularity.

Sugar. Stimulated by increases in various price and other incentives, sugarbeet production in 1976 totaled 12 million tons—down 4 percent from the 1975 crop. The overall 1976/77 sugar output reached 1.6 million tons, with beet pulp and molasses output roughly 1.25 million tons.

During 1975/76, Italy imported 515,000 tons of beet sugar and 263,000 tons of molasses and other sugars, including corn sugar. Imports in 1976/77 are expected to decline in response to the larger Italian crop and lower supplies in other European Community (EC) countries.

Citrus fruits. Italy's 1976/77 lemon crop is estimated at 767,000 tons—7 percent lower than that of last year, owing to adverse weather and a higher-than-usual incidence of *malsecco* (dry rot). Total exports of lemons are forecast at 240,000 tons—10,000 tons under last year's export total. Shipments to Eastern Europe continue to rise, as those to the high-quality EC market decline.

Production of oranges in 1976/77 was expected to be near the record outturn of 1.77 million tons harvested in 1974/75. However, torrential rains during the past few months report-

edly have damaged this year's crop.

Export volumes will be reduced from earlier anticipated levels, but are still forecast to equal the 200,000 tons shipped in 1975/76.

Overall 1976/77 production of mandarins had been forecast at 330,000 tons, but recent excessive rains have reduced that estimate, although no final figures are available.

Deciduous fruits. Italy's production of apples in 1976 totaled 2 million tons, a decrease of 6 percent from the 1975 crop, owing to excessive rains and hailstorms.

However, adoption of more productive varieties and improved management practices is maintaining Italy's apple production in the face of declining area.

Apple exports in 1976/77 are forecast at 390,000 tons, compared with 365,000 tons during the previous year. Exports during July-November 1976 (158,000 tons) were running 93 percent higher than during the same months a year earlier, owing to tight supplies in other European countries and favorable prices.

The 1976 pear crop is expected to total 1.35 million tons (510,000 tons of summer and 840,000 tons of fall and winter pears), 4 percent less than in 1975. All of the shortfall was in the fall and winter crop, which was adversely affected by drought in the spring and excessive rains during the summer and fall. Exports during June-December 1976, as a result, were down 20 percent from the same period of 1975, and total shipments for the year were estimated at 220,000 tons, compared with 250,000 tons a year earlier.

Vegetables. Tomato production in Italy in 1976 is estimated at 2.33 million tons, a decline of 24 percent from 1975. Area was reduced by 9 percent and yields were low, owing to excessive rains and fungus diseases.

Potato production, on the other hand, was up slightly in 1976 to 3 million tons. Owing to drought-reduced crops in Northern Europe in 1976, exports were unusually large, necessitating larger-than-usual imports late in the year, some from the United States.

Nuts. Commercial walnut production in 1976 totaled 11,000 tons, nearly 33 percent less than a year ago, owing to a very wet, cold spring that reduced yields and to continued tree cutting for valuable timber.

Shelled almond output was up slightly to 20,000 tons, with about half the crop destined for export. Filbert production—two-thirds of which is expected to be exported—is estimated at 95,000 tons in 1976.

Olive Oil. Total production of pressure olive oil in 1976/77 is forecast at 440,000 tons—a 30 percent dip from last year's output. In addition, some 40,000 tons of solvent oil are expected to be produced, compared with a yield of 60,000 tons in 1975. As with other fruits and vegetables, olive production in 1976 was adversely affected by excessive rains in the producing regions. The crop was late in maturing and the quality of the oil is expected to be poor.

Imports of olive oil are likely to be sharply higher in 1976/77, owing to the reduced crop of Italian olives, and prices have increased in response to the supply situation and will probably continue to rise during the second half of the commercial year.

Based on a dispatch from Elmer W. Hallowell
U.S. Agricultural Attaché, Rome

RECORD GRAIN CROP HELPS BOOST USSR FARM OUTPUT

BOOSTED BY a record grain crop of 223.8 million metric tons, the Soviet Union's gross farm output climbed 3 percent to \$156 billion¹ in 1976, the first year of the Tenth Five-Year Plan. A continued rebound in 1977 from 1975's disastrous crop appears likely, although agricultural forecasting is risky for a country where the climate is so marginal that serious crop failures occur about three times every decade. Last year, the USSR ranked as a top U.S. farm market—the fifth largest, in fact—as U.S. farm exports there approached \$1.5 billion for a \$353 million increase from the 1975 level.

The top five markets for U.S. farm exports in calendar 1976, the latest full-year figures available (not adjusted for transshipments), were: Japan (\$3.563 billion), the Netherlands (\$1.885 billion), West Germany (\$1.827 billion), Canada (\$1.493 billion), and the USSR (\$1.487 billion). These five countries accounted for about \$10.3 billion, almost half of the record \$23 billion of U.S. agricultural exports in 1976.

Total Soviet agricultural imports in 1976 are estimated at \$5.7 billion, down substantially from the \$9.7 billion farm import bill of 1975. Grain imports were down almost one-third to about \$2 billion as a result of the Soviet's bumper grain crop in 1976. Imports of livestock and edible livestock products rose almost 4 percent to an estimated \$800 million in 1976, while sugar and honey imports increased 14 percent to \$2.5 billion.

Soviet imports of U.S. farm products consisted mainly of grains, which accounted for \$1.345 billion, including corn (\$1.078 billion), wheat (\$250 million), and rice (\$15 million). The U.S. farm sales to the USSR in fiscal 1975/76 (July-June), the last full fiscal year, totaled \$1.86 billion. Projections for fiscal year 1976/77 (October-September) indicate that U.S. farm sales to the USSR, mainly grains and soybeans, could total \$1.1 billion. Minor commodities likely to be imported from the United States include tallow, animal hides, lemons, almonds, and dried fruits.

Soviet agricultural exports in 1976 probably dropped about 18 percent to about \$2 billion, with exports of textile fibers accounting for about 60 percent of the total.

According to official Soviet statistics, the USSR's hard currency balance-of-trade deficit was about \$5.0 billion in calendar 1976, compared with \$6.3 billion in calendar 1975.

Besides the 60-percent jump in grain production in 1976, the rice crop is estimated at 2.0 million tons (paddy basis); if realized, this would be slightly higher than 1975's. Cotton production in 1976 reached near-record levels of about 8.3 million tons of seed cotton. Cotton and rice are success stories of Soviet agriculture as both are grown under irrigated conditions, and not as dependent as other crops on seasonal rainfall.

The huge 1976 grain output has sharply reduced Soviet 1976/77 grain needs, which are projected at 10.5 million tons, only 41 percent of year-earlier totals. Soviet officials, however, have recently reiterated their pledge to buy at least 6

million tons of U.S. grain annually under the U.S.-USSR grain agreement that runs through 1980. Soviet import commitments for U.S. grain in 1976/77 currently are 6.0 million tons, including 3.0 million tons of corn and 3.0 million of wheat.

Grains. The 223.8-million-ton grain crop of 1976, which resulted mainly from good weather, increased barley seedings, and record barley yields, topped the previous high recorded in 1973, by 1.3 million tons. This huge harvest followed the disastrous 1975 grain crop of only 140.1 million tons—the lowest in 10 years. The almost 84-million-ton production gain was realized despite a 200,000-hectare decrease in sown area to 127.7 million hectares. Still, sown area was the second highest since 1964. And overall yields were just one-tenth of a quintal short of the 1973 record of 17.6 quintals per hectare.

The 1976 wheat production of 96.9 million tons was 46 percent higher than 1975's, but still only the fifth largest wheat crop on record. Harvested area of wheat totaled 59.5 million hectares, the second lowest since 1954. However, 1976's barley production, at 69.5 million tons, reached a new high. The 34.3 million hectares of barley seedings were 24 percent higher than the 1971-75 average (Ninth Five-Year Plan). This increase resulted because spring barley was used for reseeding in the wake of above-normal winterkill. The rise in barley outturn largely compensated for the below-record wheat production. The 1976 corn crop is estimated at 10.3 million tons, only slightly above the Ninth Plan average.

The condition of harvested grain ranged from excellent in Kazakhstan to below-average in parts of European Russia. Barley was in generally poorer condition than wheat as wet weather hampered harvesting operations.

Of the three major grain-growing republics (Kazakhstan, Russian Federation, and Ukraine), Kazakhstan's output of 29.8 million tons was the most impressive. This crop, 37 percent above the 1971-75 average, consisted of a high percentage of Hard Red and Durum wheat—preferred for breadmaking and semolinas. Grain production in the Russian Federation totaled 126.9 million tons, 2 percent under the record 1973 crop. The Ukraine produced 44.6 million tons, and the other 12 republics accounted for 22.5 million tons.

The Soviets have announced a 1977 grain production goal of 213 million tons, about 10 million tons under last year's record. Soil moisture conditions at year's end were generally good throughout the country, but the eventual 1977 outturn, as always, depends largely on the extent and spacing of spring and early summer rains, particularly in the spring wheat belt.

The Soviets had planned to expand seedings of winter grains 15 percent to 41 million hectares to benefit from optimum soil moisture conditions and the greater yield potential of winter grains. Unusually cold October weather, however, held winter seedings to 36.9 million hectares. Planned spring seedings, not yet announced, are expected to remain at about the 1976 level of 100 million hectares—and total harvested area in 1977 should be about the same as last year's.

State procurement of grain also climbed to record levels in 1976 as more than 92 million tons (in terms of accounting weight) were sold to state buyers, compared with only 50.2 million in 1975. Procurement prices were based on the usual complex formula involving production costs, crop quality, distances from transportation lines, and bonuses for above-quota

¹ 1 Ruble=US\$1.33 at official exchange rate.

deliveries. For example, wheat procurement prices averaged about \$119-\$128 per ton.

As in 1973, following a shortfall in the previous year's crop, the USSR relied heavily in 1976 on foreign grain to sustain livestock herds. Soviet grain imports in 1975/76 (July-June) reached 25.7 million tons—nearly 20 percent of world import demand—with U.S.-origin grain accounting for 57 percent of the total. Wheat imports are estimated at 10.1 million tons; corn, at 12.3 million.

Following the 1975 crop shortfall, Soviet grain exports in 1975/76 dropped to an estimated 500,000 tons, just 10 percent of the average for the previous 5 years. In 1976/77, Soviet grain shipments are expected to rise significantly, although efforts to rebuild stocks will keep the trade below the normal yearly level of 5-6 million tons.

Soviet grain stock levels are unknown, but it can be assumed that considerable rebuilding of stocks is underway in light of the huge 1976 outturn. State storage facilities are estimated at 140 million tons, including 37.9 million tons of elevator storage. In 1976, the USSR commissioned an additional 4.3 million tons of elevator space capacity.

Rice. The 1976 rice crop of 2.016 million tons was only slightly higher than the 1975 total of 2.009 million tons. Major reasons for this production gain were a 5 percent increase in sown area to 524,000 hectares, higher yields in Kazakhstan, where outturn rose 58 percent to 447,000 tons, and favorable water supplies and weather in the Kuban—the Soviet rice bowl. The 1977 production goal has not been announced, but area probably will again increase—perhaps, to 550,000 hectares.

Despite steady increases in rice production, the USSR continues to import about 200,000-300,000 tons annually, mostly from North Korea and Egypt. But in 1975, the USSR bought about 100,000 tons of higher quality rice from the United States, Thailand, and Italy. In 1976, the USSR imported 52,000 tons of U.S. rice, and in December, it again bought 25,000 tons from nontraditional sources—with 15,000 tons estimated to be of U.S. origin. Imports of long-grain rice in 1977 from these suppliers, including the United States, are likely to continue, given the preference in Soviet Central Asia for this type of rice.

Livestock and products. Production shortfalls in 1976 resulted almost entirely from the previous year's low grain and feed crops, and lower livestock numbers. Following record meat supplies in 1975 and large-scale distress slaughtering in the second half of 1975, meat production of 13.4 million tons last year slipped to a level first attained in 1972. Yet production declines for many livestock products in 1976 turned out to be smaller than expected. For example, raw milk production of 89.1 million tons, though down 2 percent, was still greater than 1973's. Wool outturn decreased 7 percent to 432,000 tons, but was only slightly under 1973's performance. And the production of 55.6 billion eggs, while down 3 percent, almost equaled 1974's.

In the food industry, processed meats output declined 16 percent from 1975's to 8.3 million tons, while that of whole milk products dropped just 200,000 tons to 23.4 million last year. On the positive side, butter production rose 3 percent in 1976 to about 1.2 million tons, and powdered milk and

cream production jumped 4 percent to 327,000 tons.

Planned 1977 output levels project production upturns for: Meats, to 14.5 million tons; raw milk, 92.0 million tons; eggs, 58.2 billion total; and wool, 453,000 tons.

During 1976, livestock numbers recovered rapidly from the distress slaughter of 1975. The most dramatic recovery occurred in poultry, whose numbers on State and collective farms rose from a low in early 1976 of 370 million to 438 million. By the year's end, total poultry numbers were estimated at a near-record 792 million, and they are forecast to reach a new high in 1977. Hog numbers also rose in 1976, increasing 9 percent to 63 million.

Decreases last year were registered in: Cattle, down 700,000 head to 110.3 million; goats, down 3 percent to 5.5 million; and sheep, down 1 percent to 139.4 million.

Oilseeds. Production in 1976 suffered another setback as sunflowers, which normally account for about two-thirds of the vegetable oil output, were affected by delayed plantings, disease, a cooler-than-normal growing season, and poor harvesting conditions. Sunflower production in 1976 was 5.2 million tons, 13 percent below the 1971-75 average but 5 percent above 1975's output. The Soviet goal of 7.5 million tons in 1977 appears unrealistic at this time.

Although soybean production is being encouraged, the 1976 crop was only 495,000 tons, more than one-third below 1975's. Vegetable oil output from all sources of oilseeds fell 17 percent in 1976 to 2.8 million tons. So, Soviet purchases of U.S. soybeans in fiscal 1977 may again exceed 1 million tons, with additional quantities purchased from Brazil.

Cotton. Only several weeks of bad weather late in the growing season and during harvest prevented the USSR from reaching a record production in 1976. Still, 1976's outturn of 8.3 million tons of seed cotton, or 2.64 million tons of lint, rose 5 percent above 1975's. Cotton area was 2.949 million hectares, 1 percent higher than that of 1975, while yields of 2.81 quintals of seed cotton per hectare were just under the 1975 record of 2.92.

Cotton production in 1977 could equal or slightly surpass the 1974 record of 8.4 million tons of seed cotton, or 2.66 million tons of lint, if plantings reach expectations and weather conditions are favorable.

Soviet cotton exports in 1976 probably exceeded the 800,000 tons of lint shipped in 1975. During 1976/77, the USSR should remain the major cotton supplier for Eastern Europe while making efforts to maximize hard currency earnings through exports to Western Europe, Japan, and possibly the Philippines. As cotton production has expanded, the need for imports—primarily long-staple lint—has decreased.

Other commodities. The 1976 outturn of potatoes and vegetables was disappointing, both in quantity and quality. Potato production dropped 4 percent to 85.1 million tons while the vegetable crop rose about 1 percent to 23.5 million tons. Although the sugarbeet crop increased 49 percent to 98.6 million tons, sugar content was very low. The 1977 production targets of 95.6 million tons of sugarbeets and 101 million tons of potatoes appear to be on the high side.

—Based on report by ALAN W. TRICK
U.S. Agricultural Attaché, Moscow

Brazil's Support Program Spurs Soybean Output

By ROBERT J. WICKS
U.S. Agricultural Officer
São Paulo



BRAZIL'S 1977 soybean crop, lowered 300,000 tons since the previous estimate, is currently pegged at 12 million tons, still 7 percent above the 1976 harvest. Brazilian soybean production, in a record-repeating upsurge since 1970, is projected by trade sources to reach 20 million tons by the early 1980's.

The downward revision of the 1977 crop reflects the effects of dry weather that has reduced yields in some areas. Although maturity of the crop is reported to be ahead of last year's, half of the crop has not yet been harvested.

Effective March 23, 1977, the Brazilian Government imposed an export tax on soybeans, oil, and meal amounting to 7 percent of the value at the point of sale by the exporter. The tax revenues

will be used to subsidize domestic prices of soybean oil and meal.

Brazil's recent and rapid rise in soybean production has resulted not only from increased world demand, but also from Government policies that have encouraged soybean plantings often at the expense of traditional crops.

Assuming an average growth rate of just 8 percent annually, soybean output would hit 20 million tons by 1983. Many believe, however, that tonnage could be considerably greater because of the vast areas in the cerrados that could be brought into production. From 1970 to 1977, the average annual increase in production amounted to just under 36 percent as Brazil's soybean outturn soared from only 1.5 million tons to the present high levels.

During the spectacular surge, soybean and soybean products became Brazil's top foreign exchange earner in 1974 and 1975. For 1976, Brazil's export earnings from soybeans and soybean products totaled \$1.8 billion, an increase of 38 percent from the previous year's \$1.3 billion. However, coffee—with a yearend spurt in exports—resumed the top spot by collecting an estimated \$2.4 billion in foreign exchange earnings.

The phenomenal rise in soybeans, from a level of insignificance in the 1960's and an outturn of only 1.5 million tons in 1970, has enabled Brazil to become the world's No. 2 soybean producer-exporter behind the United States. Brazil exported about 3.3 million tons of soybeans in 1975 but topped this performance with a new record shipment in the 1976/77 season. U.S. soybean exports in those 2 years are placed at 12.5 million and 15.1 million tons, respectively. The U.S. soybean production in 1976/77 is expected to drop to 34.1 million tons, down from 41.4 million in 1975/76. During the marketing year that ended March 31, 1977, Brazil's soybean exports are estimated at 3.5 million tons. Besides soybeans, Brazil registered substantial inroads into soybean meal and oil markets, by exporting an estimated 4.1 million tons of meal and 488,000 tons of oil.

The Brazilian Government's emphasis on soybeans has attempted to stimulate the growth of a sector with vast potential of increasing foreign exchange earnings. Brazil's economic situation, aggravated by a current account deficit of about \$6.3 billion in 1976, dictated that exports be increased above the impressive gains of recent years. With a still-small domestic market for soybeans—Brazil uses only 20 percent in bean meal equivalent of its production—the country will continue its focus on the export market.

Brazil's soybean culture originally was largely concentrated in Rio Grande do Sul, the southernmost State—where soybean production began in 1947 with a crop of 7,000 metric tons. In 1969, this State accounted for 70 percent of Brazil's total production, followed by Paraná, 20 percent, and São Paulo, 6 percent. By 1975, Paraná had also become a major producer, supplying 3.5 million tons, compared with 4.8 million tons in Rio Grande do Sul.

The crop, relatively unimportant until the 1960's, began to boom because

of increased world demand and the Government's active promotion of soybean production.

One motive for expanding soybeans in Paraná was the country's coffee diversification program, which provided an economic alternative to coffee producers in that State, where some 1.5 billion coffee trees were old, and low in productivity.

With a surplus of 60 million bags (60-kilogram bags), Brazil began a coffee eradication program to liberate 1.5 million hectares, and for the first time, soybeans were included among the crops receiving Government financing. Also, coffee fund monies from the Brazilian Coffee Institute were made available to finance construction of new oil crushing facilities in Paraná.

As well, producers in the south discovered the lucrative practice of double cropping wheat and soybeans, which was developed in Rio Grande do Sul with the highly supported wheat campaign that began in 1968.

Presently, there is also considerable double cropping done in Paraná, and there is potential for double cropping in parts of Mato Grosso as soybean production expands there.

Besides the incentive of attractive international prices for soybeans, national policies aided Brazil's growth as a soybean giant on the world scene.

The most important internal factors appear to be the policy of guaranteed minimum producer prices, highly subsidized prices for wheat, which increasingly has been double cropped with soybeans, and a greatly expanded availability of low-interest credit.

For several years, the guaranteed minimum producer prices for soybeans have been high enough so that normal 80-percent financing—based on minimum prices—has allowed producers to cover most of their direct variable costs. A Government study in May 1976 estimated that the cost of soybean production in Rio Grande do Sul amounted to \$2.87 per bushel.

The practice of double cropping soybeans with wheat has been particularly attractive to producers since the Government pays an extremely high subsidy for wheat in an effort to obtain wheat self-sufficiency. More than half of the 1976 soybean crop was double cropped, but this profitable practice is limited to areas of winter rains (summer rains are too heavy for wheat). In these areas, producers who double crop

usually fertilize only the wheat, thus letting soybeans absorb the residual fertilizer.

Wheat yields are low in Brazil and without the increased profitability from double cropping and high support prices, the wheat and resultant soybean area probably would not have expanded as rapidly as it has.

The third factor appearing to have a significant impact on the development of soybean production is the increased availability and utilization of low-cost agricultural credit. The significance of "low-cost credit" becomes more apparent when it is understood that soybean credit and most other agricultural credit, including production credit, costs 15 percent annually. The customary rate charged for 6-months commercial loans was running 56 to 58 percent in November 1976. Credit for soybeans has expanded to Cr\$4.6 billion in 1976 from only Cr\$364 million in 1971. Soybean credit then accounted for just 6.5 percent of the national total, whereas in 1974 it accounted for nearly 22 percent of all production credit.

During 1971-74, the period of the most rapid growth, the number of loans increased 82 percent, and the value of credit zoomed nearly eightfold—from Cr\$364 million to Cr\$3.2 billion.

However, the shift to soybeans has caused considerable distortion in the agricultural sector, especially in Paraná, the State with the greatest soybean productivity. There, about 300,000 additional hectares were planted in soybeans in the current season, partly from new land, but to a great extent at the expense of other crops.

As a result, a number of traditional crops are simply disappearing in Paraná. Peanut production in 1975 was only half the 1971 volume and a further decline of 15-20 percent was expected in 1976. Other crops such as dry beans, mint, ramie, and rice also have been losing out to soybeans, resulting in severe price distortions as well as regional supply problems and shortages.

Public concern has led to Government attempts to establish a farm crop zoning system in Paraná. It appears, however, that the advantages of planting soybeans will prevent shifts away from the crop.

Although Government policy will continue to change in response to outside pressures, the soybean sector—producers, crushers and exporters—will remain a focal point because of its foreign exchange earning capacity.

Philippines To Import Record Volume of Wheat; U.S. Share To Drop

Philippine wheat imports, which are forecast to total a record 725,000 tons during 1976/77 (July-June), are likely to reach 750,000 tons during 1977/78, according to Glenn Samson, U.S. Agricultural Attaché in Manila.

The U.S. share of 1976/77 wheat imports is expected to drop to 60 percent, well below the historic average of 75 percent, primarily because the National Grains Authority (NGA) has purchased large volumes of lower-priced Canadian wheat.

This year's record volume of wheat imports is attributed to lower import costs, which are encouraging the NGA to build stocks, Samson reports. Even though these lower costs are not passed on to the miller, flour sales have increased noticeably during the past year.

The drop in the U.S. share of the Philippine wheat market is believed to be temporary, Samson reports. If the spread between U.S. and Canadian wheat prices narrows, the U.S. share could increase to about 80 percent next year.

The official forecast for the 1976/77 corn crop remains at 2.7 million metric tons harvested from about 3.3 million hectares. Production is forecast to decline 2 percent—despite a 1 percent expansion in area—because a serious lack of rainfall in the major producing area reduced the first corn crop. Although prospects for the second crop are excellent, the outturn will still be short of requirements and imports of 110,000 tons are forecast to supplement domestic production, according to Samson.

The official January 1 rice forecast places production at 146.4 million sacks of 44 kilograms (3.9 million tons, milled) from an area of 3.6 million hectares. The increase is above the 2.8 percent annual growth needed to offset the population increase.

The Government's higher rice estimate is based on its decision to increase the rice support price and to reduce fertilizer prices.

However, this production estimate is overly optimistic, according to Samson, and probably will be revised downward because of the decreased number of Government production loans, the tardy reduction in fertilizer prices, below-normal rainfall, and some insect infestations.

Inflation, Unemployment Hinder Spain's Growth

SPAIN'S ECONOMY, squeezed by inflation, unemployment, and higher prices for imported petroleum, in 1976 achieved a real growth rate of less than 2 percent in gross national product. Prospects for 1977 are not particularly bright.

Based on Spanish Customs data, total agricultural imports (excluding fibers other than cotton, hides and skins, and forest products) in the first 9 months of 1976 were valued at the equivalent of \$1.6 billion, nearly 12 percent below the year-earlier total.

The sharp reduction in sugar imports from the 1975 level and smaller corn and other grain imports account for most of the decline in agricultural imports.

Farm exports during the first 9 months of 1976 were valued at about \$1.4 billion, nearly 35 percent above the level of such shipments in the corresponding period of 1975. The resulting deficit of about \$285 million for the 9-month period was substantially lower than the \$971 million of the corresponding period of 1975.

In terms of volume, feedgrains (mainly corn), soybeans, and defatted oilseed cakes and meals were the most important farm imports. When measured by value, the most important agricultural commodities imported into Spain during the first 9 months of 1976 were feedgrains, soybeans, coffee, tobacco, meat, and cotton.

Spain's agricultural exports in the January-September period of 1976 consisted mainly of citrus, canned fruit and vegetables, wines, fresh vegetables, olive oil, and nuts. Most of the value increases in this period were in canned fruits and vegetables, wines, and edible oils (mainly olive oil).

Imports of principal farm commodities from the United States were valued at the equivalent of about \$569 million during the first 9 months of 1976, down approximately 4 percent from the year-earlier level.

Corn and soybeans accounted for approximately 75 percent of these imports, although corn imports were down 30 percent to \$222 million, partly because of the bumper 1975 barley crop.

Spain's exports of agricultural commodities to the United States during the first 9 months of 1976 were valued at about \$124 million, up 69 percent from the year-earlier level. Most of these exports consisted of table olives, canned fruits and vegetables, olive oil, and wines.

Despite the high rate of inflation prevailing during 1976, Spain's total meat consumption rose somewhat from the 1975 level, although—as in 1975—most of the increase was in poultry meat. This pattern was largely a result of higher prices for red meats and a steep rise in fish prices, brought about by diminishing catches.

Consumption of fats and oils expanded moderately during 1976. Demand for olive oil increased, reflecting the decline in prices for this oil compared with high 1975 prices.

Following the 8-9 month drought that prevailed in much of Spain in 1976, farmers enjoyed the benefits of generous rainfall during the rest of year. As a result, Spain's agricultural situation is considerably better than it was a year earlier.

Production and trade in important commodities during

1977 are forecast as follows:

Grain and feed. A nominal increase in wheat area is expected with possibly an equivalent nominal decrease in barley area. Corn area is expected to remain stable or to decline slightly. However reductions in area should be offset by improved average yields.

Token quantities of Durum and/or Hard wheats are likely to be imported, as during the previous 2 calendar years. Corn demand should be higher than in 1976, unless exceptionally high barley yields should again cause partial substitution of barley for corn.

Oilseeds: Sunflower production probably will be expanded. Soybean output prospects are more encouraging than during the past 2 years, if only because of the announced—but still unknown—Government measures to foster soybean production. However, total outturns will remain insignificant in relation to aggregate needs.

Projected higher poultry and egg production is likely to stimulate demand for protein meals, notably soybean meal.

Spain is the fourth largest market for U.S. soybeans, taking 1.2 million tons valued at \$254 million in 1976—about two-thirds of total soybean imports.

Cotton: In spite of high world prices, a moderate decline in 1977/78 area seems likely, because of reduced financing for the Government's cotton support program. The expected reduction in the domestic crop plus an anticipated drawdown in stocks this season and stable domestic demand for cotton will cause a short-run increase in import trade—especially if world prices should decline.

Tobacco: The 1977 production pattern is expected to be similar to 1976's. A new growth in demand for imported leaf is projected for 1977, indicated by stagnated domestic leaf production. Most of the increase will likely be in dark leaf. Higher retail prices for imported cigarettes and growing competition on the part of the domestic monopoly substitute brands are likely to be reflected in reduced cigarette imports.

Fruit and vegetables: Output is expected to rise moderately, reflecting mostly the coming into production of new orchards.

Sugar: A moderate decline in sugarbeet production is expected because output in 1976 was unusually high. The large carryover of stocks theoretically should lead to reduced sugar imports. However, Spain's purchase contract with Cuba requires imports of more than 100,000 metric tons of sugar during the year. On February 20, 1977, the contract was revised to call for imports during 1977 of 140,000 tons at 17 cents per pound.

Livestock, poultry, and dairy products: In view of the excellent winter pasture conditions, prospects for imported livestock (mostly dairy cattle) appear good. However, the depressed economic situation and its restricting effects on red meat and dairy product consumption may dampen any real growth in livestock and meat trade in the near future.

Spain continues to impose variable import levies on a number of farm commodities, including feedgrains, pulses, oilseeds, protein meals and cakes (including fishmeal and meat meal), vegetable oils, and cheese.

—Based on dispatch from GEORGE J. DIETZ
U.S. Agricultural Attaché, Madrid

Some Fertilizer Importers May Be Future Exporters

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SINCE 1974, when fertilizers were in short supply and crop production fell in several countries, the pendulum seems to have swung to the other extreme so that most user countries now have adequate supplies and some deficit countries may become fertilizer exporters in future years.

Much of the industry's growth stems from its boom-or-bust nature. Prices increase at a rapid rate when demand exceeds producer capacity. This, in turn, encourages overbuilding of facilities, surplus supplies, falling prices, and lower profits.

The tight world supply situation, beginning in 1973, pushed fertilizer prices upward and encouraged food producers to demand more fertilizer than normal. The inability of the world fertilizer industry to supply this enhanced demand became a major concern to fertilizer supplier and user nations alike, in the midst of worries about a potential food shortage. As a result, a number of very expensive nitrogen plants have been, or are being, built.

One misconception that leads to serious plant overbuilding is the confusion of potential with actual demand. Overlooked is the fact that most developing countries restrict foreign currency uses to make only essential purchases (which sometimes exclude fertilizer), undertake new programs slowly, and have poor distribution and farmer credit facilities. Furthermore, many farmers in these countries lack cash to buy fertilizer, or are unwilling to buy as much fertilizer as needed for highest productivity or profitability. High fertilizer prices and/or lower commodity prices also can seriously dampen fertilizer usage.

Despite these problems, which should have had a braking effect on plant construction, current estimates indicate that the developing countries—particularly India, Bangladesh, Mexico, Indonesia, and the People's Republic of

China—will increase their production of nitrogen and phosphate fertilizers at a faster clip than consumption. This move toward self-sufficiency will enable them to become less dependent on major fertilizer exporters, such as the United States, West Germany, and France, and in some years may provide exportable surpluses.

For example, India, the largest importer of fertilizers in 1974/75, is expected to increase its output of nitrogen fertilizer by 27 percent, and of phosphate fertilizer by 50 percent in 1976/77. Bangladesh, a major nitrogen-fertilizer importer in 1975, may have some to export after a factory damaged by an explosion 2 years ago is repaired and output reaches maximum. Mexico expects to become self-sufficient in fertilizers this year, eventually reaching an output level that will enable it to export moderate quantities.

Indonesia will probably soon be looking for markets for nitrogen ferti-

lizer from some new plants. And the People's Republic of China, which for most of the past decade was the world's largest net importer of nitrogen fertilizer, will continue to move toward self-sufficiency as more of its 13 large, imported ammonia-urea plants are completed.

The present supply situation contrasts in several ways with that in 1974. Then, short fertilizer supplies, strong demand, and relatively limited production capacity combined to cause widespread crop shortfalls, record grain prices, and projections that indicated the world would continue to face fertilizer shortages and rising prices for some time to come.

Panic and speculative buying followed, exaggerating the shortages and pushing prices even higher. New plant capacity was brought into operation, but was unable to produce enough fertilizer to alleviate immediate demand.

Buyer resistance to higher prices restricted international demand in 1975 and 1976, and growing supplies brought a weakening in prices. Some producer countries have tried to hold out for high prices but have not been successful. Worldwide production capacity is expanding substantially, especially for nitrogen and phosphate, and several important fertilizer-importing countries hold large stocks.

World demand is expected to rise over the next few years, but the extent of the gains will depend on commodity prices and the resulting incentives to

WORLD FERTILIZER PRODUCTION CAPACITY
1974/75-1980/81
[Million metric tons]

Country	1974/75	1975/76	1976/77	1977/78	1978/79	1979/80	1980/81
Nitrogen							
Developed countries	34.22	35.27	36.79	39.12	40.33	41.3	41.63
Developing countries	8.64	9.58	10.88	14.0	18.69	20.41	21.75
Centrally planned countries	27.34	30.24	32.87	34.86	37.13	40.22	40.77
Total ¹	70.19	75.09	80.54	87.98	96.15	101.93	104.15
Phosphate							
Developed countries	14.98	15.57	16.77	17.0	17.72	18.02	18.02
Developing countries	2.79	3.44	4.53	4.98	5.33	6.83	7.22
Centrally planned countries	3.96	4.64	4.86	5.06	5.17	5.41	5.41
Total ¹	21.74	23.65	26.16	27.04	28.22	30.26	30.65
Potash							
Developed countries	17.17	17.19	17.61	18.09	18.3	18.53	18.99
Developing countries32	.32	.38	.43	.48	.48	.58
Centrally planned countries	11.1	13.3	13.55	13.6	13.7	14.75	14.85
Total ¹	28.59	30.81	31.54	32.12	32.48	33.76	34.42

¹ May not add to totals because of rounding. Source: FAO. "Longer-Term Fertilizer Supply/Demand Position and Elements of a World Fertilizer Policy," ACS:F/76/2, May 1976, Commission on Fertilizers, Second Session, Rome, June 8-11, 1976, based on estimates by the FAO/UNIDO/World Bank Working Group on Fertilizers, April 1976.



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FOREIGN AGRICULTURE

producers to get higher yields. A recurrence of the tight market conditions of 1974 is unlikely.

Rising by slightly less than 7 percent over the previous year's total, world fertilizer consumption in 1975/76 reached 87 million metric tons, nearly half of it nitrogen fertilizer. Current estimates indicate that this kind of fertilizer will make up almost half of total consumption through 1980/81. Phosphate and potash fertilizers should each make up roughly one-fourth of the total.

World nitrogen consumption in 1975/76 was about 42 million tons—up almost 9 percent from that of the previous year. With production expected to increase slightly in 1976/77, output will continue to rise to a little over 59 million tons by 1980/81—a climb of about 40 percent over the 1975/76 level—and nitrogen consumption in the developing countries is expected to climb about 11 percent, and that of countries having centrally managed economies, 7 percent. The developed countries also will boost their total usage of nitrogen fertilizer through 1980/81, but at a declining yearly rate.

(A number of U.S. nitrogen plants had been closed because of the natural gas shortage in 1976, and some may be still closed. However, total 1977 U.S. production of nitrogen fertilizer is expected to be slightly above last year's level, although there may be some local shortages.)

Between 1975/76 and 1980/81, world phosphate consumption is ex-

pected to climb from about 24 million tons to nearly 32 million, an increase of about 33 percent. The outlook is for the developed countries to consume about half of the total through 1980/81, the centrally planned countries, one-third of the total, and the developing countries, the remainder.

World phosphate use in 1976/77 is expected to rise slightly.

In 1975/76 the world used 21 million tons of potash. Slightly more usage is expected in 1976/77, and by 1980/81, usage may increase to slightly less than 29 million tons. While depending largely on available supplies, world consumption levels also will be affected by potash mine nationalization policies enacted by Canada's Saskatchewan Province, source of most U.S. potash imports. At the present time, the potash supply is expected to remain more than adequate to meet demand through 1980/81, barring any unforeseen developments.

World fertilizer production capacity, particularly for nitrogen and phosphate, is expected to climb significantly over the next few years. Between 1975/76 and 1980/81, nitrogen fertilizer capacity should increase by nearly 40 percent, from 75 million to 104 million tons. Phosphate capacity could climb by 30 percent to some 31 million tons in 1980/81. For potash, however, current estimates point to a capacity rise of close to 12 percent, the total going from 31 million tons in 1975/76 to about 34.5 million tons in 1980/81. And Saskatchewan policies will be important.

USSR Sugar Output Estimate Cut— Imports To Jump

The 1976/77 production of sugar in the USSR from the 1976 sugarbeet harvest is now estimated by Foreign Agricultural Service at 7.5 million metric tons (raw value). This compares with a production of 7.7 million tons in 1975/76 and represents a substantial reduction from earlier expectations.

While production of beets was reported at 98.6 million tons and procurements at the factory for processing at 85 million tons, large quantities will not be processed. Beets were damaged by mid-October frosts and, reportedly, further losses occurred because of improper storage and processing.

The cumulative outturn of 1976/77 beet sugar through February amounted to 6,720,000 tons of refined sugar (7.3 million tons, raw value), about 89 percent of average output during recent years. As domestic consumption in the USSR amounts annually to about 11.5 million tons (raw value), imports of sugar in 1977 will probably amount to about 4 million tons, compared with the 3-year average for 1973-75 of 2.6 million tons.

The reduction of the USSR production estimate results in a world sugar estimate for 1976/77 of 85.6 million tons. As world consumption for 1976/77 is estimated at 82.8 million tons, it is now expected that only 2.8 million tons will be added to world stocks.